

number of exemptions and are only partially enforced. Many household exposures could be prevented by educating parents about lead in paint, pottery, ethnic remedies, and home hobbies.

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The Tuberculosis and HIV Connection

EVIDENCE SUGGESTS that clinical tuberculosis eventually develops in a high percentage of persons infected with both the human immunodeficiency virus (HIV) and *Mycobacterium tuberculosis*. Tuberculosis often precedes other opportunistic diseases in patients with the acquired immunodeficiency syndrome (AIDS), but tuberculosis-infected patients who survive the first episode of AIDS are at a high risk of clinical tuberculosis developing. This has contributed to the increase in the number of tuberculosis cases reported in the United States since 1984, which had been in a general slow decline for many years. In the United States, AIDS has been reported in as many as 12% of patients with tuberculosis.

The clinical presentation of tuberculosis in HIV-infected persons varies with the immune status, ranging from the more commonly recognized pulmonary apical cavitation in HIV-infected persons with minimal immune impairment to disseminated disease presenting with blood cultures positive for *M tuberculosis* in persons with advanced AIDS. A 5-mm or more reaction to tuberculin skin testing (purified protein derivative [PPD]) is seen in about a third of those AIDS patients with tuberculosis who are tested. The chest x-ray film often shows an atypical pattern that includes hilar and mediastinal adenopathy. Cavitation is present in less than 25% of cases, and diffuse reticulonodular infiltrations are frequently seen. *M tuberculosis* has been found in the sputum of some AIDS patients with normal chest roentgenograms. Extrapulmonary disease occurs frequently, often associated with pulmonary disease. Although *Mycobacterium avium-intracellulare* is frequently identified in patients with AIDS, acid-fast bacilli identified on staining from any specimen in a high-risk HIV-infected person should be considered and treated as *M tuberculosis* until proved otherwise by culture.

The unusual patterns of tuberculosis in AIDS patients may make diagnosis difficult. Because tuberculosis is both contagious and treatable, every effort should be made to identify *M tuberculosis* in AIDS patients. The PPD skin test remains the most reliable test for detecting tuberculosis infection and should be done as early as possible in any person infected with HIV or diagnosed with AIDS. Any measurable induration should be considered as potentially significant, but a 5-mm or larger reaction is definitely positive. Any abnormality on a chest x-ray film in an AIDS patient should be considered suspicious for tuberculosis. Because of the

high frequency of cases of extrapulmonary tuberculosis in patients with AIDS, any body fluid specimen—sputum, bronchial washings, cerebrospinal fluid, pleural fluid, ascitic fluids, urine—or lung biopsy specimen should be processed for acid-fast staining and culture during an evaluation for infection.

Antituberculous medication should be given immediately whenever *M tuberculosis* is found or suspected in persons with HIV infection or at an increased risk for HIV infection. The recommended regimen is isoniazid, 300 mg daily, plus rifampin, 600 mg daily, and pyrazinamide, 1,500 mg daily. Ethambutol at a dose of 25 mg per kilogram of body weight daily should be added to the regimen when central nervous system or disseminated tuberculosis exists or isoniazid resistance is suspected. Pyrazinamide therapy may be discontinued after two months if the sputum smear results have converted to negative. The treatment of documented tuberculosis should be continued for at least 9 to 12 months or until the patient's cultures are negative for *M tuberculosis* at least six months. Tuberculosis in patients with HIV infection or AIDS responds well to antituberculous chemotherapy. When tuberculosis patients with AIDS die, it is usually of other complications of AIDS and not the tuberculosis if they are receiving antituberculous medication.

Preventive therapy should be given to any HIV-infected person or anyone at high risk for infection, regardless of age, who has a positive reaction to a PPD skin test. Actual disease should be excluded before starting the therapy. Preventive therapy in this circumstance consists of giving isoniazid, 300 mg daily, for at least 12 months.

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Opportunities for Preventing Woman Abuse and Battering

WOMAN ABUSE AND BATTERING is a public health problem of epidemic proportions. In a recent national survey, 16% of women reported physical abuse by their spouses; 6% reported severe abuse—that is, punching, kicking, choking, beating, and attacks with a weapon. In 1980 this resulted in 21,000 admissions to hospitals, 99,800 hospital days, 28,700 emergency department visits, 39,900 physician visits, and \$44.3 million in medical costs.

Woman abuse is only infrequently identified by physicians. The use of simple nursing protocols with direct questioning has shown that 30% of all women presenting with injuries are battered. Only 10% to 25% of these are diagnosed by emergency department physicians, however. In a recent prospective study of women obtaining private and public prenatal services, 8% reported physical abuse during the current pregnancy and 15% in the past. Prenatal care providers, however, had never asked about abuse.

Early identification and intervention are vital, as violence tends to escalate, and relationship change becomes more

difficult. Physicians from various specialties can play a role in prevention by maintaining a high index of suspicion and asking about abuse in a gentle and supportive way. The following findings, although nonspecific, may be clues to abuse: Obstetrics and gynecology: injury, divorce, separation, or suicide attempt during pregnancy; sexual dysfunction; persistent complaints; abortion, miscarriage, or premature delivery. Medicine or family practice: frequent visits with vague or unremitting symptoms; nonspecific clinical findings; requests for sleep medication or tranquilizers; abuse of drugs (legal or illegal) or alcohol; labels in the medical record such as "hysterical" or "hypochondriac." Emergency medicine: trauma to head, face, breasts, abdomen, or both extremities; history incompatible with injury; previous trauma; coexistence of trauma with complaints of insomnia, anxiety, depression, alcohol or drug abuse; accompaniment by a male partner who is alcoholic, suspicious of medical personnel, or reluctant to leave the patient alone. Pediatrics: women with children having psychosomatic complaints; co-existent child abuse. Psychiatry: anxiety; depression; suicide attempt; alcohol or drug abuse or both, psychosis; an inability to "cope."

Because of the high prevalence of abuse and variable

clinical presentation of victims, questioning should be done routinely. It has been shown that women not suffering abuse do not mind being questioned and battered women are grateful that someone has finally asked about abuse. Women should be assessed concerning the potential for lethal violence, offered support, assured that they are not alone, and provided information concerning community resources, such as shelters, counseling programs, and therapeutic programs for abusive men. Because of a ninefold increased risk of suicide, dispensing of pain or psychotropic medications should be minimized. Physicians should maintain frequent contact and remain available to provide support and information as needed. In this way, physicians and other health providers can play a key role in breaking the cycle of violence in American families.

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